

REMARKS

Claims 2-6, 8-15 and 19 currently appear in this application. The Office Action of August 24,, 2007, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

Rejections under 35 U.S.C. 112

Claims 8-15 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed. Claim 10 has been amended in accordance with the Examiner's helpful suggestion. Claim 15 has been amended to recite that the sol-gel is in the form of particles. "Enzyme" has been deleted from the claims.

Art Rejections

Claims 9, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kok et al., *J. Biomater. Sci. Polymer Edn.*, Vol. 12, No. 11, pp 1161-1176 (2001) in view of Strobel et al., U.S. 5,766,473.

This rejection is respectfully traversed. Claim 19 has been amended to recite that the detector "consists of" acetylcholinesterase immobilized in a sol-gel or in a membrane. This language excludes the presence of any other enzymes. It is respectfully submitted that it would not be obvious to omit choline oxidase from the membrane, because the biosensor of Kok includes both enzymes. The biosensor of Kok is different from the detector claimed herein, because the detector claimed herein is specific for organophosphorus and carbamate compounds.

Claim 19 has also been amended to recite that the acetylcholinesterase and an indicator that develops color when acetylcholinesterase is inhibited are immobilized on a sol-gel or on a membrane. Support for this amendment can be found in the specification as filed at pages 6 and 7, paragraphs 0020 and 0021.

The Examiner alleges that it would be obvious to use a semipermeable polyethylene bag in Strobel. However, it should be noted that Strobel at column 7, lines 5-9, states that it is an advantage that articles produced according to the present invention have a surface shell which is permanent in the presence of aqueous systems or organic solvents. This would indicate that the bag is not semipermeable at all. In the passage the Examiner cited, column 33, lines 43-45, the

enzyme-loaded membranes were stored in a polyethylene bag containing calcium sulfate desiccant for two months prior to use. If the polyethylene bag were semipermeable, the desiccant would probably be used up in a short time.

The Examiner alleges that it would have been obvious to use a semipermeable bag when desiring to contact the acetylcholinesterase with the inhibitor when the acetylcholinesterase is in the bag.

Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims 9, 10 and 19 above, and further in view of Stanford et al., U.S. 7,008,524 and Avnir et al., U.S. 5,650,311.

This rejection is respectfully traversed. As noted above, the claims have been amended to exclude any enzyme other than acetylcholinesterase. Since Kok discloses a biosensor containing two enzymes, and there is nothing in Kok that suggests that the choline oxidase is extraneous, Kok should no longer be a valid reference against the presently claimed invention. Neither Stanford nor Avnir adds anything to Kok to suggest that a single enzyme be immobilized in the package as claimed herein.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 8 and 14, above, and further in view of Charych et al., U.S. 6,485,987.

This rejection is respectfully traversed. Claim 11 does not claim tetramethylorthosilicate *per se*, but only as a carrier for the acetylcholinesterase. It is respectfully submitted that Charych adds nothing to the previously cited references, as the combination of these references would not lead one skilled in the art to the particular detector claimed herein.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claim 11, above, and further in view of Khue et al., U.S. 5,624,831.

This rejection is respectfully traversed. Khue adds nothing to the previously cited references, because there is no disclosure of a biosensor packaged as claimed herein. Without the biosensor as claimed herein, the disclosure of using trehalose or other sugars to stabilize acetylcholinesterase does not render claims 12 and 13 obvious.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 8 and 14 and further in view of Magdassi et al., U.S. 6,303,349.

This rejection is respectfully traversed. As discussed above, Kok does not disclose or suggest a detector using only acetylcholinesterase and packaged as claimed herein, and none of the references cited along with Kok suggests the use of one enzyme in the type of detector claimed herein.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

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